

1N5910

(Formerly MLED650)

VISIBLE RED LIGHT-EMITTING DIODE

... ideally suited for panel mount indicator applications in panels up to 0.125 inches thick.

- JEDEC Registered for Guaranteed Mechanical and Electrical Conformity
- High Luminous Intensity
- Economical Plastic Package
- Solid State Reliability
- Wide Viewing Angle
- Red Diffusing Lens

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	4.0	Volts
*Forward Current — $T_A = 25^\circ\text{C}$	I_F	60	mA
*Peak Pulse Current (Pulse Width = $1.0 \mu\text{s}$, $f = 10 \text{ kHz}$)	i_F	1000	mA
*Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	$P_D(1)$	125 1.67	mW mW/ $^\circ\text{C}$
*Operating and Storage Temperature Range	T_A, T_{stg}	-40 to +100	$^\circ\text{C}$

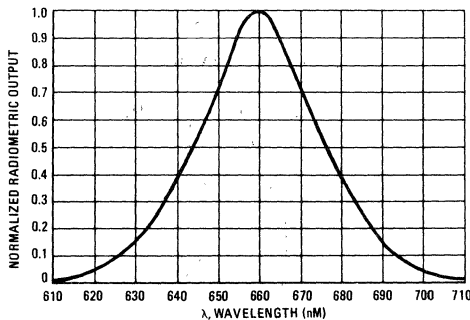
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta\text{JA}}(1)$	600	$^\circ\text{C}/\text{W}$
*Soldering Temperature — 1/16" From Case for 10 Seconds	-	240	$^\circ\text{C}$

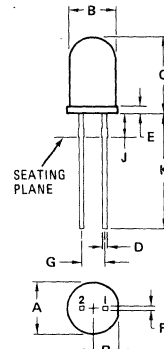
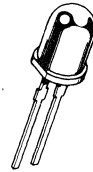
(1) Mounted in metal panel

*Indicates JEDEC Registered Data.

FIGURE 1 — NORMALIZED RADIOMETRIC OUTPUT versus WAVELENGTH



PANEL MOUNT LIGHT EMITTING DIODE VISIBLE RED PN GALLIUM ARSENIDE PHOSPHIDE



STYLE 1.
PIN 1. CATHODE
2 ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.72	5.97	0.225	0.235
B	4.95	5.21	0.195	0.205
C	8.38	8.69	0.330	0.350
D	0.41	0.51	0.016	0.020
E	0.64	0.89	0.025	0.035
F	0.30	0.46	0.012	0.018
G	2.44	2.64	0.096	0.104
J	2.44	2.54	0.096	0.100
K	12.57	13.21	0.495	0.520
R	2.54	2.79	0.100	0.110

CASE 279-01

***ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Fig. No.	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ($I_R = 100 \mu\text{A}$)	—	BV_R	4.0	—	—	Volts
Forward Voltage ($I_F = 20 \text{ mA}$)	2	V_F	—	1.6	2.0	Volts

OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristics	Fig. No.	Symbol	Min	Typ	Max	Unit
Axial Luminous Intensity (1) * ($I_F = 20 \text{ mA}$) ($I_F = 50 \text{ mA}$)	3,4	I_o	0.3 —	0.8 1.4	— —	mcd
Effective Luminous Area	—	—	—	0.03	—	Square-Inch Circle
Peak Emission Wavelength	—	λ_p	—	660	—	nM
Spectral Line Half Width	—	$\Delta\lambda$	—	30	—	nM

(1) Axial Luminous Intensity (I_o) is measured using an International Commission on Illumination corrected Photometer and a measurement solid angle of 0.003 Steradian.

*Indicates JEDEC Registered Data.

TYPICAL CHARACTERISTICS

FIGURE 2 – FORWARD CHARACTERISTICS

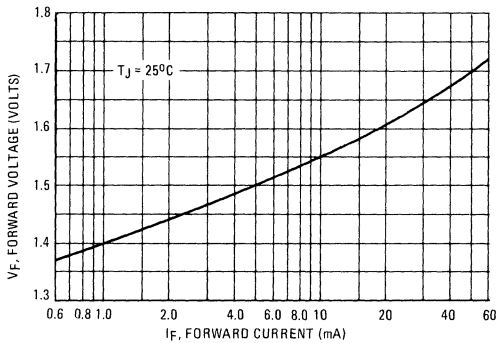


FIGURE 3 – AXIAL LUMINOUS INTENSITY versus JUNCTION TEMPERATURE

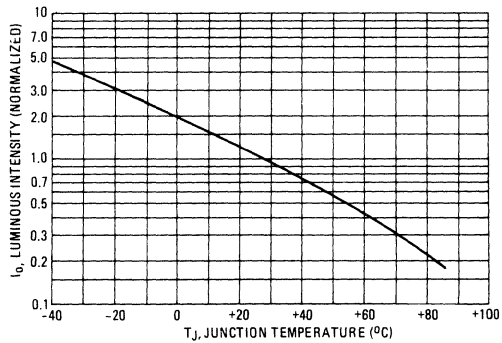


FIGURE 4 – AXIAL LUMINOUS INTENSITY versus CONTINUOUS FORWARD CURRENT

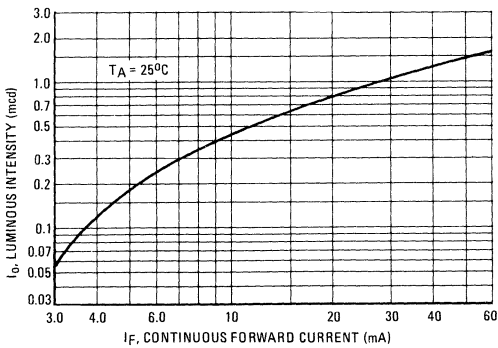


FIGURE 5 – SPATIAL RADIATION PATTERN

